# RECLANIATION Managing Water in the West

MT DROUGHT ADVISORY COMMITTEE MEETING

RESERVOIR AND RIVER OPERATIONS



August 16, 2007







U.S. Department of the Interior **Bureau of Reclamation** 

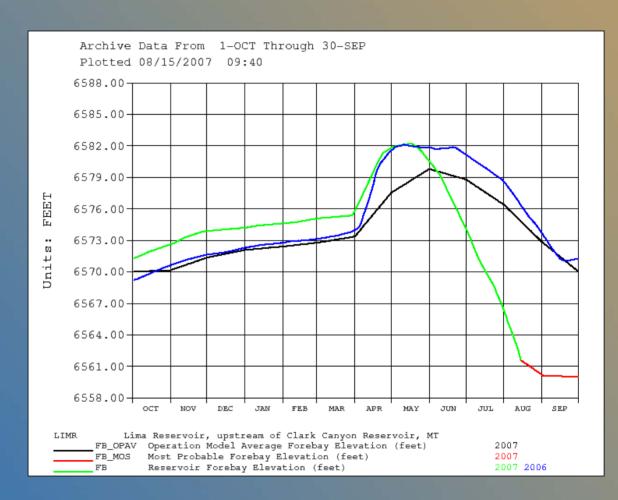
#### Lima Reservoir

July-August inflow is near the lowest of record at essentially 0 and continues to remain well below normal

Storage @ 13,100 af - 29% of average & 15% of full capacity

Since mid-May, storage has declined dramatically to meet irrigation demands

Water supply outlook is poor but water users should have received a full water supply in 2007



#### Hebgen Reservoir (PPL-MT)

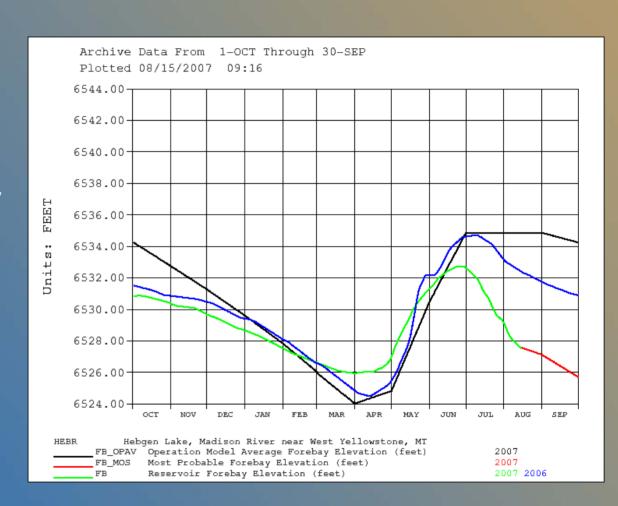
July-August inflow is near the lowest of record at 64% of average and continues to remain well below normal

Storage @ 298,200 af - 77% of average & 77% of full capacity

**Currently releasing 825 cfs to the Madison River** 

Pulse flows have been implemented much of the summer to control river temperatures

Water supply outlook is poor as year-end storage will be at critically low levels



#### Clark Canyon Reservoir

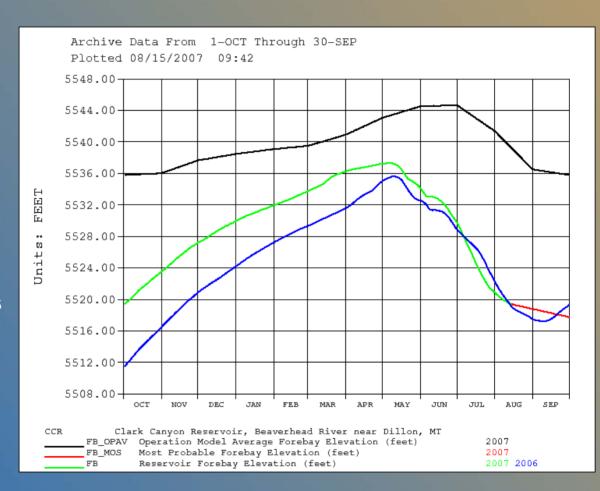
July-August inflow is the 9<sup>th</sup> lowest of record at 53% of average and continues to remain well below normal

Storage @ 64,400 af - 46% of average & 37% of full capacity

Releases maintained at 325 cfs to meet irrigation demands

Water supply outlook is poor as year-end storage will be at critically low levels

Water users have received slightly reduced water allotments in 2007



#### Canyon Ferry Reservoir

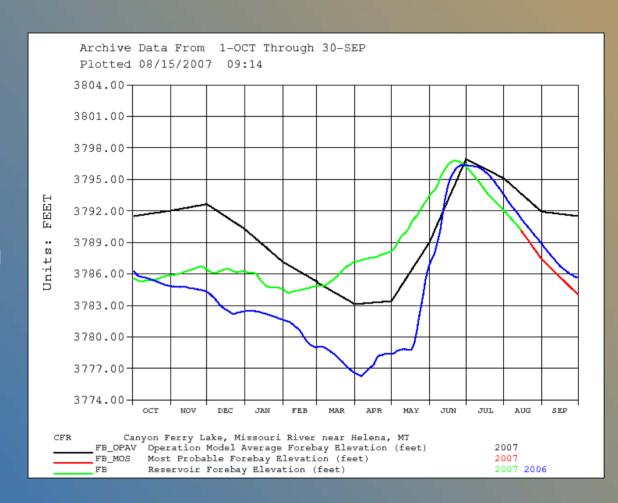
July-August inflow is the 4<sup>th</sup> lowest of record at 37% of average and continues to remain well below normal

Storage @ 1,669,700 af - 94% of average & 88% of full capacity

Releases are being maintained at 3,500 cfs below Holter Dam

Operations are expected to mimic those last year in 2006

Water supply outlook looks favorable but must continue with conservative releases to protect storage



#### Gibson Reservoir

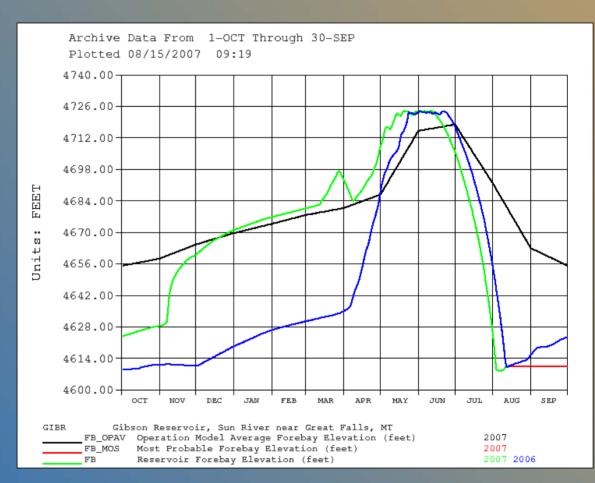
July-August inflow was 3<sup>rd</sup> lowest of record at 46% of average and continues to remain well below normal

Storage @ 5,500 af - 12% of average & 6% of full capacity

Total release from Gibson is being maintained at 200 cfs of which 185 cfs is being released to the Sun River

Releases are being adjusted to meet the irrigation demands

Even though all reservoirs were full, water users experienced severe water shortages this summer because of the lack of summer precipitation



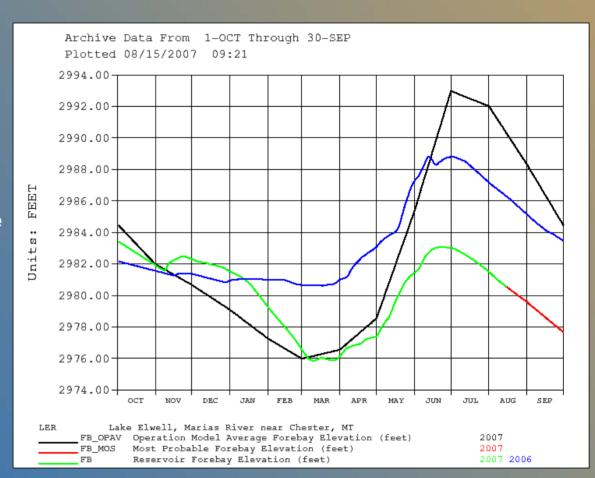
#### Lake Elwell (Tiber Reservoir)

July-August inflow is the lowest of record at 4% of average and continues to remain well below normal

Storage @ 727,400 af - 83% of average & 79% of full capacity

Releases to the Marias River are being maintained at 400 cfs

Water supply outook is poor as year-end storage will be at critically low levels, prompting a further reduction in releases to 320 immediately following the irrigation season



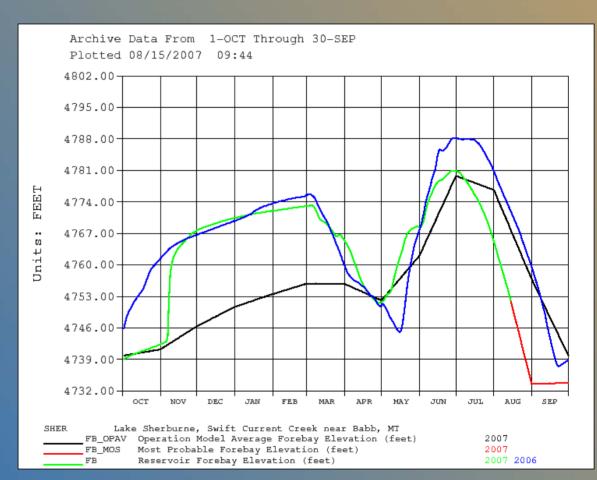
#### Lake Sherburne

July-August inflow is the 10<sup>th</sup> lowest of record at 72% of average and continues to remain well below normal

Storage @ 18,700 af – 52% of average & 28% of full capacity

Releases from Lake Sherburne are 565 cfs and diversions from St. Mary River Basin to Milk River Basin is about 585cfs

Water supply outlook is good & all Milk River water users are expected to receive a full water supply in 2007



#### Fresno Reservoir

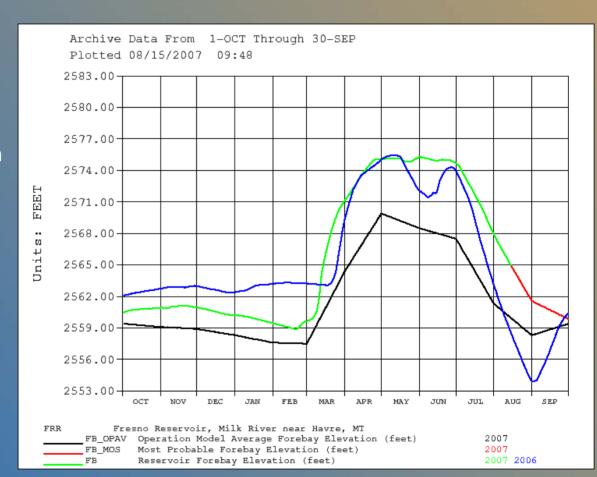
July-August inflow is the 6<sup>th</sup> lowest inflow of record at 72% of average and continues to remain well below normal

**Currently diverting 585 cfs from St. Mary Basin to Milk River** 

Storage @ 54,100 af - 132% of average & 58% of full capacity

As irrigation demands decline, releases are being reduced and are currently being maintained at 750 cfs

Water supply outlook is good and water users should receive a full water supply in 2007



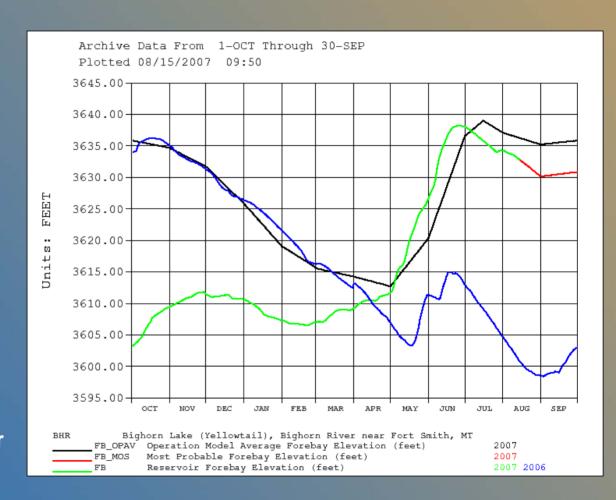
#### Bighorn Lake (Yellowtail Reservoir)

July-August inflow is the 8<sup>th</sup> lowest of record at 63% of average and continues to remain well below normal

Storage @ 988,100 af - 96% of average & 92% of full capacity

Releases are being maintained at 1,750 cfs, about 750 cfs below the minimum desired fisher flow of 2,500 cfs

As Reclamation continues to monitor climatic conditions closely, the present water supply looks favorable for providing higher fall and winter releases



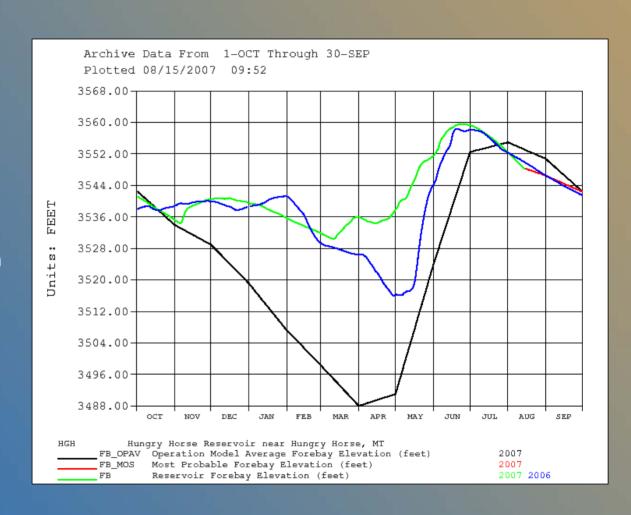
#### **Hungry Horse Reservoir**

July-August inflows continue to remain well below average

Storage @ 3,191,600 af - 97% of average & 92% of full capacity

Releasing 4,100 cfs to river

Operations were successful in filling Hungry Horse and conservative releases will continue



#### Reservoir Conditions for Reclamation Reservoirs

## BUREAU OF RECLAMATION MONTANA AREA OFFICE RESERVOIR OPERATIONS REPORT 14-Aug-2007 ALL CONTENTS IN ACRE-FEET

				RESERVOIR CONDITIONS							WATER SUPPLY OUTLOOK							
				ELEVA	ATION	CAPACITY					MTN. SNOW WATER CONTENT				AUGUST RUNOFF			
				(FEET)		(ACRE-FEET)		2007			(INCHES)				AUGUST 1st FORECAST			
	NORMAL	TOTAL	AVERAGE					%	% OF	% OF				% OF			% OF	
RESERVOIR NAME	FULL POOL	CAPACITY	CAPACITY	2006	2007	2006	2007	FULL	AVG	Last Yr	2006	2007	AVG	AVG	(KAF)	AVG	AVG	
CLARK CANYON	5546.10	174,368	140,039	5519.06	5519.30	63,679	64,372	37	46	101	0.00	0.07	0.00	0	N.A.	N.A.	N.A.	
CANYON FERRY	3797.00	1,891,888	1,782,072	3791.31	3790.19	1,705,627	1,669,691	88	94	98	0.00	0.06	0.01	1068	N.A.	N.A.	N.A.	
GIBSON	4724.00	96,477	45,936	4610.75	4610.65	5,556	5,525	6	12	99	0.00	0.10	0.00	0	N.A.	N.A.	N.A.	
PISHKUN	4370.00	46,670	36,237	4362.09	4357.67	35,400	29,987	64	83	85	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
WILLOW CREEK	4142.00	32,300	21,143	4133.86	4126.87	20,711	13,165	41	62	64	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
LAKE ELWELL	2993.00	925,648	878,393	2986.32	2980.54	811,931	727,346	79	83	90	0.00	0.05	0.00	0	N.A.	N.A.	N.A.	
SHERBURNE	4788.00	67,854	35,877	4771.86	4751.97	41,159	18,713	28	52	45	0.00	0.05	0.00	0	N.A.	N.A.	N.A.	
FRESNO	2575.00	92,880	41,134	2558.57	2564.95	37,981	54,097	58	132	142	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
NELSON	2221.60	78,951	54,578	2212.72	2215.48	45,766	54,954	70	101	120	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
BIGHORN LAKE	3640.00	1,070,029	1,025,141	3600.80	3632.86	749,010	988,144	92	96	132	0.00	0.04	0.00	0	N.A.	N.A.	N.A.	

	Infl	ow	Change From A Year Ago				eet				
RESERVOIR NAME	Current	% of Avg	Elevation		Capacity	to	Fill				
CLARK CANYON	161	51	(	).24	693	2	26.80				
CANYON FERRY	1,327	59	-1	1.12	-35,936		6.81				
GIBSON	241	63	-(	0.10	-31	11	13.35				
PISHKUN	654	N.A.	-4	1.42	-5,413	1	12.33				
WILLOW CREEK	34	N.A.	-6	6.99	-7,546	1	15.13				
LAKE ELWELL	7	3	-5	5.78	-84,585	1	12.46				
SHERBURNE	69	52	-19	9.89	-22,446	3	36.03				
FRESNO	449	92	6	5.38	16,116	1	10.05				
NELSON	148	N.A.	2	2.76	9,188		6.12				
BIGHORN LAKE	1,392	55	32	2.06	239,134		7.14				

#### **Summary of Operations of Reclamation Projects**

- July-August inflows to Reclamation reservoirs were at or near record low levels and continue to remain at well below average levels.
- Reservoir storages vary from 12% of average @ Gibson to 132% of average at Fresno.
- Reclamation reservoir storages are in generally good shape for this time
  of year with the exception of Clark Canyon on the Beaverhead River and
  & Gibson on the Sun River. These reservoirs will be at critically low
  levels by the end of the irrigation season.
- With the exception of the Beaverhead and Sun River watersheds,
   Reclamation water users experienced good water supplies this year.
- Water users in the Sun River watershed experienced water shortages in early August.
- Water users in the Beaverhead River basin operated with slightly reduced allotments in 2007.